

Rejoinder to the review reports on “*NLO Rutherford Scattering and energy loss in a QGP*”

Abdullah Khalil and W. A. Horowitz

Dear SAIP Reviewer,

Thank you so much for your comments. This rejoinder summarizes the corrections which were applied on the SAIP proceeding, based on the given comments. The rejoinder is presented in a tabular form as following:

Table 1: General issues

Comment	Action	Description
Match template specifications on paragraph first line indentation.	Fixed	We made sure that all the paragraphs include a first line indentation
The references are not arranged in the order they appear in text.	Fixed	We made sure that the references appear in the same order as they appear in the text.
Stray overlines in abstract?	Fixed	We used the command $\overline{\mathrm{MS}}$ all over the manuscript to appear the same.

Table 2: Specific issues

Comment	Action	Description
“We usually don’t add the disconnected diagrams where they describe a non-scattering process which we do not have an interest in, but the interference between the disconnected diagram with the emission and absorption process will produce a connected amplitude squared which will play an important role in IR cancellation from the initial state as in [5, 8, 13, 15].” -Suggest splitting. -don't (do not).	Fixed	-We split the long sentence to “We usually do not add the disconnected diagrams where they describe a non-scattering process. However, the interference between the disconnected diagram with the emission and absorption process produces a fully connected cut diagram. The contribution from adding these diagrams plays an important role in IR cancellation from the initial state as it is shown in [13–16].” -don't is replaced by do not in the previous sentence.
Further work need to be done.	Fixed	Replaced by Further work needs to be done.
Calla-Smanzik equation → needs reference.	Fixed	We added George Sterman “An introduction to quantum field theory” as a reference.

We hope the revised version is now suitable for publication.

Sincerely,

Abdullah Khalil

University of Cape Town